Patent claims:

1. A moldable-foam molding whose density is in the range from 8 to 100 g/l, obtainable via fusion of prefoamed foam beads composed of expandable, pelletized thermoplastic polymer materials, comprising

from 50 to 90% by weight of polystyrene B), selected from free-radical-polymerized glass-clear polystyrene (GPPS) or anionically polymerized polystyrene (APS),
and
from 10 to 50% by weight of styrene copolymer A), selected from styrene-butadiene block copolymer, styrene-α-methylstyrene copolymer, acrylonitrile-butadiene-styrene (ABS), styrene-acrylonitrile (SAN), acrylonitrile-styrene-acrylate (ASA), methacrylate-butadiene-styrene (MBS), and methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) polymers.

2. The moldable-foam molding according to claim 1, wherein at least 80% of the cells of the individual foam beads are of closed-cell type.

3. An expandable, pelletized thermoplastic polymer material which comprises

from 50 to 90% by weight of polystyrene B), selected from free-radical-polymerized glass-clear polystyrene (GPPS) or anionically polymerized polystyrene (APS),
and
from 10 to 50% by weight of styrene copolymer A), selected from styrene-butadiene block copolymer, styrene-α-methylstyrene copolymer, acrylonitrile-butadiene-styrene (ABS), styrene-acrylonitrile (SAN), acrylonitrile-styrene-acrylate (ASA), methacrylate-butadiene-styrene (MBS), and methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) polymers.

4. The expandable, pelletized thermoplastic polymer material according to claim 3, which comprises from 3 to 7% by weight of an organic blowing agent.

5. A process for preparing expandable, pelletized thermoplastic polymer materials according to claim 3, encompassing the steps of

a) preparing a mixture from

from 50 to 90% by weight of polystyrene B), selected from free-radical-polymerized glass-clear polystyrene (GPPS) or anionically polymerized polystyrene (APS),

and

from 10 to 50% by weight of styrene copolymer A), selected from styrene-butadiene block copolymer, styrene-α-methylstyrene copolymer, acrylonitrile-butadiene-styrene (ABS), styrene-acrylonitrile (SAN), acrylonitrile-styrene-acrylate (ASA), methacrylate-butadiene-styrene (MBS), and methyl methacrylate-acrylonitrile-butadiene-styrene (MABS) polymers.

b) using a static or dynamic mixer at a temperature of at least 150°C to incorporate an organic blowing agent into the polymer melt,

c) cooling the polymer melt comprising blowing agents to a temperature of at least 120°C,

d) discharge via a die with holes whose diameter at the discharge from the die is at most 1.5 mm, and

e) pelletizing the melt comprising blowing agent directly downstream of the die plate under water at a pressure in the range from 1 to 20 bar.

6. A process for producing moldable-foam moldings, according to claim 1, wherein hot air or steam is used in a first step to prefoam expandable, pelletized thermoplastic polymer materials according to claim 3 to give foam beads whose density is in the range from 8 to 100 g/l, and, in a second step, these are fused in a closed mold.